

Title (en)

CATHODE AND ELECTROCHEMICAL DEVICE

Title (de)

KATHODE UND ELEKTROCHEMISCHE VORRICHTUNG

Title (fr)

CATHODE ET DISPOSITIF ÉLECTROCHIMIQUE

Publication

EP 3844830 A4 20220608 (EN)

Application

EP 20843081 A 20200522

Priority

- CN 201910655730 A 20190719
- CN 2020091800 W 20200522

Abstract (en)

[origin: WO2021012768A1] A cathode and an electrochemical device. The cathode comprises: a cathode current collector; and a cathode active material layer disposed on a surface of the cathode current collector, wherein the cathode active material layer comprises a first particle and a second particle, the first particle comprising a secondary particle composed of a third particle, the third particle being a primary particle, the first particle having an average particle size of 5 µm to 20 µm, the third particle having an average particle size of 200 nm to 700 nm, the second particle comprising a fourth particle and/or a secondary particle composed of the fourth particle, the fourth particle being a primary particle, the second particle having an average particle size of 3 µm to 5 µm, the fourth particle having an average particle size of 800 nm to 5 µm, the first particle being contained in a region close to the cathode current collector, and the second particle being contained in a region away from the cathode current collector. The cathode can significantly improve the rate performance, cycle performance and safety performance of the electrochemical device.

IPC 8 full level

H01M 4/36 (2006.01); **H01M 4/485** (2010.01)

CPC (source: CN EP US)

H01M 4/131 (2013.01 - CN US); **H01M 4/364** (2013.01 - EP US); **H01M 4/366** (2013.01 - CN); **H01M 4/485** (2013.01 - CN);
H01M 4/505 (2013.01 - CN US); **H01M 4/525** (2013.01 - CN EP US); **H01M 10/0525** (2013.01 - US); **H01M 10/0525** (2013.01 - CN EP);
H01M 2004/021 (2013.01 - US); **H01M 2004/028** (2013.01 - US); **H01M 2220/30** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)

No further relevant documents disclosed

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2021012768 A1 20210128; CN 110429252 A 20191108; CN 110429252 B 20201127; EP 3844830 A1 20210707; EP 3844830 A4 20220608;
JP 2022515014 A 20220217; JP 7261881 B2 20230420; US 2021313563 A1 20211007

DOCDB simple family (application)

CN 2020091800 W 20200522; CN 201910655730 A 20190719; EP 20843081 A 20200522; JP 2021530099 A 20200522;
US 202016964746 A 20200522